

PROGRAM: Electrical and Power Transmission Technology

**PROGRAM
CIP CODE:** 46.0300

DESCRIPTION: The Electrical and Power Transmission Technology a program that generally prepares individuals to apply technical knowledge and skills to install indoor and outdoor residential, commercial, and industrial electrical systems and associated power transmission lines. Includes instruction in electricity, safety procedures, wiring, insulation and grounding, schematic blueprint interpretation, equipment operation and maintenance, and applicable codes and standards is designed to prepare students for careers in the Construction Industries. The occupational standards for both options are aligned with the National Center for Construction Education and Research (NCCER) standards. Construction Technologies I includes units of instruction in electrical, masonry, concrete finishing and plumbing. Construction Technologies II includes units of instruction in floor systems, wall and ceiling framing, roof framing, site layout, exterior finish and roofing applications. The program is comprised of a core curriculum and two options: Option A (Residential Electrician) and Option B (Industrial Electrician).

RECOMMENDED PROGRAM SEQUENCE OF COURSES:

**Career
Preparation
Grades
11-12** The following describes the recommended courses developed from industry-validated skills necessary for initial employment or continued related education.

46.0300.10 Electrical Fundamentals: This course includes units of instruction in career planning, oral and written communications, understanding financial operations, teamwork, human relations, basic safety, construction math, hand tools, power tools, reading blueprints, basic rigging and exploring careers in construction.

-and-

At least one option must be included as part of the instructional sequence for this program:

Option A

46.0300.20 Residential Electrician I: Course description is under development.

-and-

46.0300.25 Residential Electrician II: Course description is under development.

-or-

Option B

46.0300.30 Industrial Electrician I: This course prepares the individual to apply basic knowledge and skills in electrical theory and applications in industrial settings by performing preventive maintenance tasks or making minor repairs.

-and-

46.0300.35 Industrial Electrician II: This course prepares the individual to apply advanced technical knowledge and skills to repair electrical machinery and equipment and delivery systems.

And program may elect to add:

46.0300.75 Electrical and Power Transmission Technology - Internship: This course provides CTE students an opportunity to engage in learning through participation in a structured work experience that can either be paid or unpaid and does not necessarily require classroom instruction that involves the application of previously developed Electrical and Power Transmission Technology knowledge and skills.

-or-

46.0300.80 Electrical and Power Transmission Technology - Cooperative Education: This course utilizes a cooperative education methodology to combine school-based and supervised work-based learning experiences, directly related to the standards identified for the Electrical and Power Transmission Technology program.

TEACHER CERTIFICATION REQUIREMENTS FOR THE ELECTRICAL AND POWER TRANSMISSION TECHNOLOGY PROGRAM

CAREER PREPARATION: The instructor must be CTE certified according to the following table

Electrical and Power Transmission Technology	CERTIFICATES	
	Types: (To Be Determined) Approved Areas: (To Be Determined)	Types: (To Be Determined) (To Be Determined)
Note: <ul style="list-style-type: none"> ▪ Electrical and Power Transmission Technology, 46.0300.70 may be a part of the sequence and the teacher must hold a Cooperative Education Endorsement (CEN). ▪ Teacher/Coordinator 46.0300.75 is not required to have a Cooperative Education Endorsement (CEN). ▪ Teacher/Coordinator 46.0300.80 is required to have a Cooperative Education Endorsement (CEN). 		

CERTIFICATE ABBREVIATIONS FOR THE ELECTRICAL AND POWER TRANSMISSION TECHNOLOGY PROGRAM

Certificate Types	Approved Areas List
(To Be Determined)	(To Be Determined)